KANSAS-NEBRASKA BIG BLUE RIVER COMPACT REPORT
U.S. Geological Survey—Water Year 2009

The U.S. Geological Survey (USGS) continues to operate two streamflow gaging stations for the Compact Administration—Big Blue River at Barneston, NE (06882000), and Little Blue River at Hollenberg, KS (06884025). An electronic data logger (EDL) at each station automatically records streamflow stage every 15 minutes. These instantaneous values are transmitted via satellite to USGS offices, where they are used to compute preliminary values of instantaneous and daily discharge that are immediately posted to the Web (addresses shown below). Before the data are finalized, updates and revisions are made as needed, based on a series of quality checks and reviews. Finalized values of daily discharge and summary statistics are published annually on a site-by-site basis on a national Web page (address shown below).

During water year (WY) 2009 (October 1, 2008 to September 30, 2009), periodic visits were made to the stations to maintain and calibrate the sensing and recording equipment, make discharge measurements, and download the data directly from the EDLs, as a backup to the satellite data. The discharge measurements were used to determine shifts from the stage-discharge relations (rating curves) that were then used to convert stage values to corresponding values of discharge.

For each of the State delegations and the Compact chairman, copies of the WY 2009 published data (manuscript, discharge daily values, statistics tables, and discharge hydrograph) from *WDR2009: Water-Data Report 2009* are attached for each station. These site-data sheets (PDF files) are available online at http://wdr.water.usgs.gov/wy2009/search.jsp along with other data for the Nation. Also attached are plots of the annual mean discharges for the periods of record, and plots of the daily discharges for WY 2009 compared to those for the median daily statistic for each day of the year.

Current (real-time) and historical data on surface water, ground water, and water quality for the Nation can be accessed and downloaded via the National Water Resources website (http://water.usgs.gov/) or from the Nebraska Water Resources website (http://ne.water.usgs.gov/). Daily, monthly, and annual streamflow statistics are also available under "Surface Water" on the National site and under "Historical data: Streamflow" on the Nebraska site. Up to 120 days of unit values data and all daily values can be accessed using the real-time options.

Jason Lambrecht
Chief, Hydrologic Data Section

U.S. Geological Survey, Nebraska Water Science Center
5231 S. 19th St., Lincoln, NE 68512-1271
(jmlambre@usgs.gov)
402-328-4124 (office), 402-328-4101 (fax), 402-416-2363 (mobile)

May 18, 2010

Instant Information about Water Conditions: Ask the River to Text You a WaterAlert
Released: 5/17/2010 10:38:02 AM

***Sign up at* http://water.usgs.gov/wateralert.**

Now you can receive instant, customized updates about water conditions by subscribing to WaterAlert, a new service from the U.S. Geological Survey. Whether you are watching for floods, interested in recreational activities or concerned about the quality of water in your well, WaterAlert allows you to receive daily or hourly updates about current conditions in rivers, lakes and groundwater when they match conditions of concern to you.

"Real-time water data are essential to those making daily decisions about water-related activities, whether for resource management, business operations, flood response or recreation," said Matt Larsen, USGS Associate Director for Water. "WaterAlert continues USGS efforts to make data immediately available and relevant to every user."

WaterAlert allows users to receive updates about river flows, groundwater levels, water temperatures, rainfall and water quality at any of more than 9,500 sites where USGS collects real-time water information. This information is crucial for managing water resources, including during floods, droughts and chemical spills.

"This is fantastic," said Jim Cantore, Weather Channel field meteorologist. "The new WaterAlert system from the USGS provides the latest river information to people in harm's way. This could be the first alert to a developing flood and can even help out during drought periods."

WaterAlert also allows kayakers, rafters and boaters to better understand when conditions are optimal and safe for recreational activities.

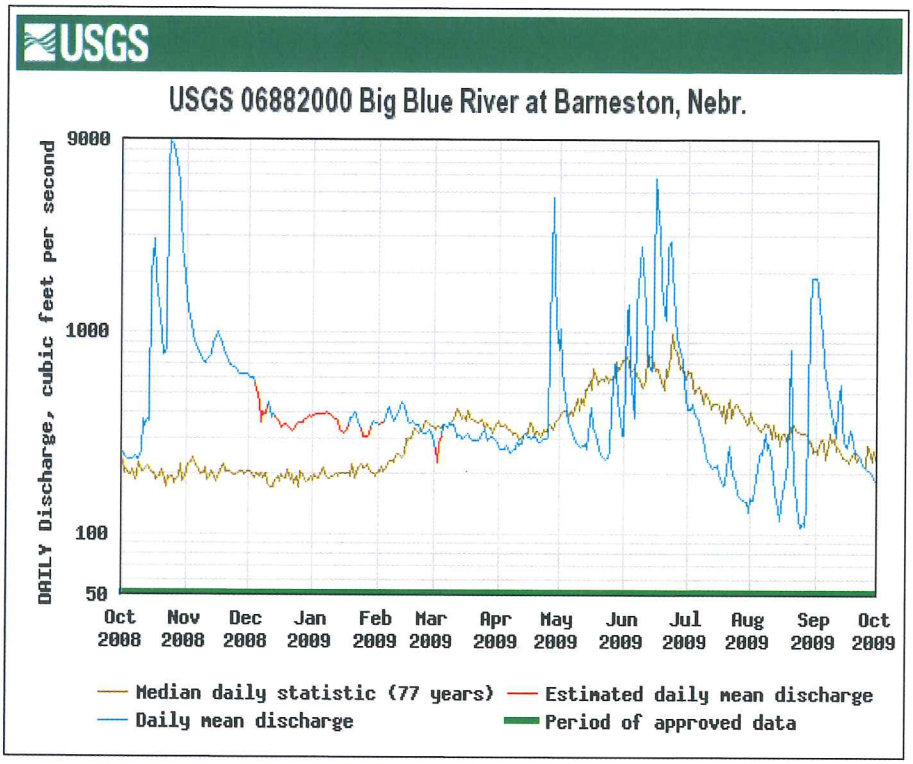
"The WaterAlert service is a fantastic resource for boaters of all abilities and disciplines," said Wade Blackwood, executive director of the American Canoe Association. "During rain events, water levels on some rivers can rise quickly. This service will be useful as a warning system and will keep paddlers aware of water conditions in order to paddle safely."

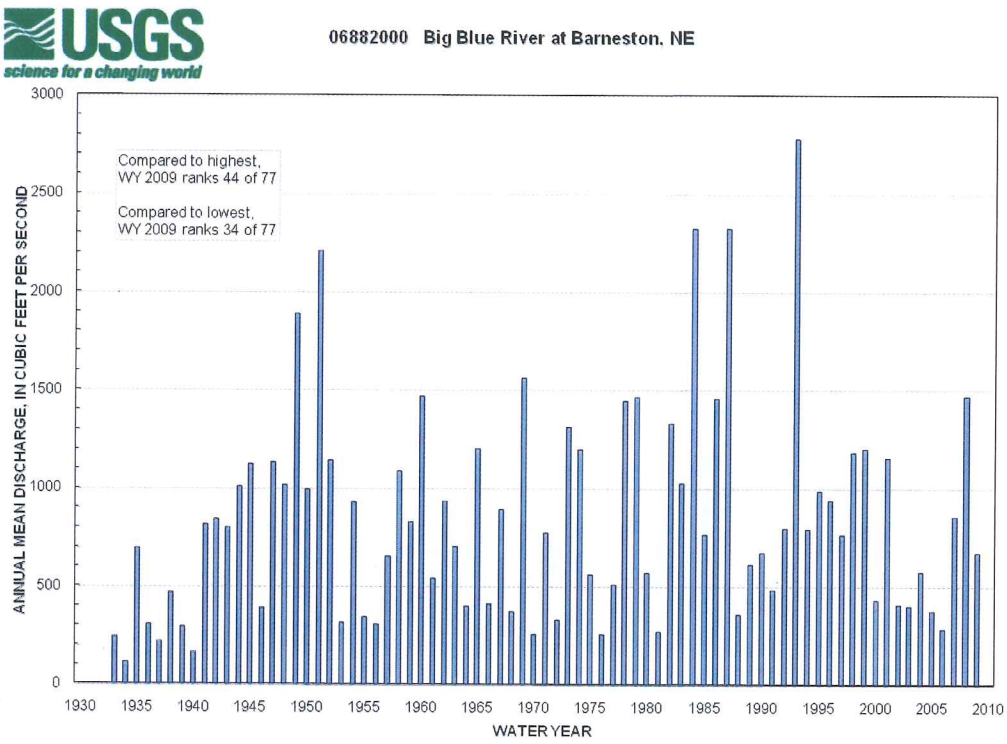
WaterAlert users start at http://water.usgs.gov/wateralert and select a specific site. Users then select the preferred delivery method (email or text), whether they want hourly or daily notifications, which data parameter they are interested in, and the threshold for those parameters. Users can set the system to alert them when conditions are above a value, below a value, and between or outside of a range.

For example, emergency managers may be interested in setting up alerts when thresholds are exceeded, such as in the case of a flood. Water-supply managers could set an alert for times when groundwater well levels are low enough to require shutdown of supply pumps. Recreational rafters may find it useful to set a threshold that lets them know when the water levels are high enough to pass over rocks but not so high as to be unsafe. There is no limit to the number of subscriptions per user at a single site or multiple sites.

The USGS operates an extensive, real-time water information network, involving 9,081 continuous and partial record streamgages, as well as 369 lake, 1,278 well and 3,632 precipitation gages throughout the United States. USGS Water Science Centers in each state can provide more detailed information on water conditions and USGS response to local events.

For **Big Blue River at Barneston**, 9 discharge (and stage) measurements, ranging from 193 ft^3/s (3.66 ft) to 4,790 ft^3/s (10.30 ft), were made during WY 2009. The annual mean discharge of 673 ft^3/s was less than half that of WY 2008 (1,470 ft^3/s) and less than the new historical mean of 846 ft^3/s for WYs 1933–2009 (77 years of record). The maximum and minimum daily discharges were 8,760 ft^3/s on June 16 and 108 ft^3/s on Aug. 25, 2009.





For **Little Blue River at Hollenberg**, 9 discharge (and stage) measurements, ranging from 75.3 ft^3/s (1.99 ft) to 12,200 ft^3/s (12.98 ft), and three inspections were made during WY 2009. The annual mean discharge of 388 ft^3/s was less than the WY 2008 mean of 722 ft^3/s and the new historical mean of 500 ft^3/s for WYs 1975–2009 (35 years of record). The maximum and minimum daily discharges were 12,400 ft^3/s on Oct. 24, 2008 and 58 ft^3/s on Aug. 23, 2009.